



September 6, 2019

Re: H2-Oh-Yeah (Steamtown)  
Notice of Violation (NOV)  
NPDES  
Morrow County  
PTI No. 1244335

Ms. Betsy L. VanWormer, P.E.  
Environmental Specialist III  
Ohio EPA Division of Surface Water

Subject: Response to NOV

Ms. VanWormer,  
Please see Renergy's responses below to the email requesting information to resolve the NOV sent to us on August 13, 2019. We have also attached additional documents as referenced in the responses below.

PTI No. 1244335: The PTI was approved for the anaerobic lagoon treatment of digester effluent. The accompanying land application management plan (LAMP), 4MP00028, permits the land application of the treated effluent from the north storage lagoon.

- a) Violation Description: Biosolids from the south Steamtown pond were land applied at a field authorized for Emerald BioEnergy, LLC.
- b) Additional Information: The NPDES permit to allow for the beneficial use of biosolids from the Steamtown ponds has not been issued.
- c) Requested Action: Please submit the sample results for the biosolids that were land applied from the south Steamtown pond and the agronomic rate calculations for the land

Renergy's Response:

We have attached the third party lab results taken at the time of land application to determine the percent solids as well as the ARC that was completed prior to land application and then finally completed with the acreage information and gallons applied after land application. Please note on the Brookside data the percent solids came to 1.78%, when you subtract the Percent Wet Basis number for Moisture from 100.

### **BROOKSIDE LABORATORIES, INC.**

**\*\* MANURE ANALYSIS REPORT \*\***

Renergy, Inc.  
PO Box 249  
Delaware, OH 43015

File Number: 58251  
Date Received: 06/18/2019  
Date Reported: 06/20/2019

Submitted By: Brookside Consultants of Ohio, Inc.

|                      |                |                                      |                 |
|----------------------|----------------|--------------------------------------|-----------------|
| Lab Number           | 6256           | <i>Steamtown land<br/>app sample</i> |                 |
| Description          | SSLG<br>A      |                                      |                 |
|                      | % Dry<br>Basis | % Wet<br>Basis                       | lbs/<br>1000gal |
| Moisture             |                | 98.22                                | 8242.3          |
| Mineral Matter       | 44.38          | 0.79                                 | 66.29           |
| Lost By Ign (Org M+) | 55.62          | 0.99                                 | 83.08           |

### Biosolids Agronomic Rate Calculation Worksheet

#### General Information

|                |           |
|----------------|-----------|
| Ohio EPA #     | 59-00078  |
| Field ID #     | MOQ-02-01 |
| Generator Name | Steamtown |

#### Biosolids Data and Beneficial Use Methods

|  |                 |
|--|-----------------|
| Ammonia Nitrogen                                       | 55800.00 mg/kg  |
| Total Kjeldahl Nitrogen                                | 114000.00 mg/kg |
| Total Phosphorus                                       | 28700.00 mg/kg  |
| Organic Nitrogen                                       | 116.40 lbs/ton  |
| Available Nitrogen                                     | 146.52 lbs/ton  |
| Phosphate (P <sub>2</sub> O <sub>5</sub> )             | 65.72 lbs/ton   |
| Will Immediate Incorporation / Injection be performed? | Yes             |

#### Beneficial Use Site Information

|   |                        |           |
|---|------------------------|-----------|
| Soil Phosphorus   | 39.33 ppm              | Mehlich 3 |
|   | 14.61 ppm              |           |
| Please note that the agronomic rates and phosphorus index have been calculated within the <i>Calculated Agronomic Rates</i> section; however, based upon the above provided <i>Soil Phosphorus</i> result, you must utilize the most limiting factor or the <i>Phosphorus Index</i> : |                        |           |
| County  | Morrow                 |           |
| Soil Type   | Pewamo silty clay loam |           |
| Hydrologic Soil Group   | C                      |           |
| <b>Year 1</b>   | Crop 1                 | Crop 2    |
| Crop Type(s)  | Corn (Grain)           |           |
| Expected Crop Yield(s) (bu/acre or tons/acre)   | 200                    |           |
| <b>Year 2</b>   | Crop 1                 | Crop 2    |
| Crop Type(s)  |                        |           |
| Expected Crop Yield(s) (bu/acre or tons/acre)   |                        |           |
| <b>Year 3</b>   | Crop 1                 | Crop 2    |
| Crop Type(s)  |                        |           |
| Expected Crop Yield(s) (bu/acre or tons/acre)   |                        |           |
| <b>Year 4</b>   | Crop 1                 | Crop 2    |
| Crop Type(s)  |                        |           |
| Expected Crop Yield(s) (bu/acre or tons/acre)   |                        |           |
| <b>Year 5</b>   | Crop 1                 | Crop 2    |
| Crop Type(s)  |                        |           |
| Expected Crop Yield(s) (bu/acre or tons/acre)   |                        |           |
| Crop Nitrogen Requirements (Year 1)   | 240 lbs/acre           |           |
| Existing Available Nitrogen   | lbs/acre               |           |
| Non-Biosolids Nitrogen Application  | lbs/acre               |           |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) Fertilizer Application   | lbs/acre               |           |
| Non-Biosolids Organic Phosphate (P <sub>2</sub> O <sub>5</sub> ) Application  | lbs/acre               |           |
| Biosolids Phosphate (P <sub>2</sub> O <sub>5</sub> ) Beneficial Use   | 107.65 lbs/acre        |           |
| Total Organic Phosphate (P <sub>2</sub> O <sub>5</sub> ) Fertilizer Application   | 107.65 lbs/acre        |           |

#### Phosphorus Index

|  |  |          |              |
|--|--|----------|--------------|
| Soil Loss  | 5 tons/acre/year   | Subvalue | 5            |
| Connectivity to "waters of the State"  | Concentrated flow does not leave the beneficial use site and is adjacent to an intermittent or perennial stream. |          | 4            |
| Runoff Class - Slope Range   | 1-3%   |          | 4            |
| Soil Phosphorus  |  |          | 2.42         |
| Application - Phosphate (P <sub>2</sub> O <sub>5</sub> ) Fertilizer  |  |          | 0            |
| Method - Phosphate (P <sub>2</sub> O <sub>5</sub> ) Fertilizer   | None applied.  |          | 0            |
| Application - Organic Phosphate (P <sub>2</sub> O <sub>5</sub> ) Fertilizer                                    |  |          | 6.46         |
| Method - Organic Phosphate (P <sub>2</sub> O <sub>5</sub> ) Fertilizer   | Immediate incorporation or applied on 200% cover.  |          | 0.5          |
| Does runoff flow through a filter strip designed per USDA Ohio-NRCS Field Office Technical Guide Standard 393? | No   |          | 0            |
| <b>Total Phosphorus Index</b>  |  |          | <b>22.38</b> |

#### Calculated Agronomic Rates

|                                      |  |               |
|--------------------------------------|--|---------------|
| Nitrogen Agronomic Rate              | 1.64   | dry tons/acre |
| i. Calculated Agronomic Rate         | 1.64   | dry tons/acre |
| Single Year Phosphate Agronomic Rate | 1.22   | dry tons/acre |
| Multi-Year Phosphate Agronomic Rate  | 1.22   | dry tons/acre |
| Phosphorus Index                     | Medium potential for phosphorus runoff. Use the Nitrogen Agronomic Rate. |               |

#### Beneficial Use Site Records

|   |  |  |
|---|--|--|
| Quantity of Biosolids Beneficially Used                               | 101.91                                 | dry tons   |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) Beneficially Used Per Acre | 130.05                                 | lbs/acre   |
| Acreage   | 103                                    |  |
| Date Biosolids Delivered to Beneficial Use Site                       | 6/9/2019                               |  |
| Dates of Beneficial Use   | 6/9/2019                               | to 6/10/2019   |
| Total Days Biosolids Stored at Beneficial Use Site                    | 0.00                                   | Days   |
| Date Signage Posted at Beneficial Use Site                            | 6/2/2019                               |  |
| Date Signage Removed from Beneficial Use Site                         |  |  |
|   | <input type="checkbox"/> Yes           | Is a permanent sign posted at the beneficial use site? |
|   | <input checked="" type="checkbox"/> No |  |

Ohio EPA (10/13)

- a) Violation Description: Treated wastewater from the north lagoon has been applied via center pivot at the Township Road 224 field. One sign was observed along Township Road 224 that stated that Class B biosolids from Emerald BioEnergy had been land applied. No signs were observed along the property lines bordering residential property.
- b) Requested Action: Please place the required signs at the fields where treated wastewater is land applied and submit a plan detailing the procedures to ensure proper signage is in place prior to land application of treated wastewater.

#### Renergy's Response:

On August 12<sup>th</sup> we submitted an email to Betsy VanWormer with our updated Land Application SOP which included the procedure for ensuring proper signage is in place prior to land application of treated wastewater. It is included in this document as well for your reference. Also, included below is a photo of the current new signage posted for Steamtown irrigation at the entrance to Steamtown and between the yard of the home on 224 and the irrigation fields. The photo below was also submitted via email to Betsy VanWormer on August 12<sup>th</sup>.





## Land application Standard Operating Procedures and Restrictions According to OAC 3745-40-08

- Beneficial Use Land Application (BUA) of Class B Biosolids shall be done in accordance to all regulations described in the Ohio Administrative Code 3745-40. Class B Biosolids may be utilized at an agronomic rate that is specific for each beneficial use site.
- Agronomic rates will be calculated utilizing the OEPA ARC sheets and an ARC summary provided to contracted operators prior to any land application event by Renergy. ARC's and ARC Summaries will be completed and stored digitally on our BOX file storage system. The ARC summary as well as field maps will be supplied to contractors before scheduled land application
- Check Field Conditions Before and After
  - Just prior to biosolids application, check the condition of the fields for wetness and adequate access. Scheduled applications may have to be postponed due to weather restrictions or 100% saturated soil conditions in the top few inches.
  - After land application is complete, check field areas where pooling could most likely occur. If pooling exists land application operator will till area to ensure injection.
- Land application equipment should be designed and maintained to ensure that biosolids are applied evenly across the field at the proper application rate.

Application equipment (box spreaders or liquid applicators) should be calibrated regularly, at least once a year, and files to be stored by land application contractors.
- Precipitation Prohibitions and Restrictions
  - Beneficial Use of Class B Biosolids shall not be applied during a significant and prolonged precipitation event.
  - For BUA sites with a dominant soil hydrological group A-C
    - If there is at least a 50% chance of precipitation over ½", surface application of Class B Biosolids may not be applied within 24 hours prior to the expected time of the rainfall event.
    - Class B Biosolids may be applied within 24 hours of a ½" rainfall (chance of 50% or greater) if the method of application is through injection.

- For BUA sites with a dominant soil hydrological group D
  - If there is at least a 50% chance of precipitation over ¼”, surface application of Class B Biosolids may not be applied within 24 hours prior to the expected time of the rainfall event.
  - Class B Biosolids may be applied within 24 hours of a ¼” rainfall (chance or 50% or greater) if the method of application is through injection.
  - Weather documentation must be kept on file, daily, during all BUA events. This can be done by going to [weather.gov](http://weather.gov). Select the nearest location that provides weather information. Print off the “Hourly Weather Graph” and keep on file.

#### Isolation Distances/Buffer Zones

Table C-1: Isolation distance requirements-

|  | Surface application<br>isolation distance<br>requirements (feet) | Injection or<br>immediately<br>incorporated<br>isolation distance<br>requirements (feet) | Applicable biosolids<br>classification |
|--|--|--|--|
| Bedrock                                | 3  | 3  | Class B or bulk<br>exceptional quality |
| Surface waters of<br>the<br>state      | 33   | 33   | Class B or bulk<br>exceptional quality |
| Sinkhole or<br>UIC class V<br>drainage | 300 without<br>grass buffer;<br>100 with a<br>grass buffer       | 300 without<br>grass buffer;<br>100 with a<br>grass buffer                               | Class B or bulk<br>exceptional quality |
| Occupied Building                      | 300  | 100  | Class<br>B                             |
| Private potable<br>water<br>source     | 300  | 100  | Class<br>B                             |
| Medical care<br>facility               | 1000   | 300  | Class<br>B                             |

Note: All Buffer Zones must be acknowledged Prior to BUA event by supplying the land application contractor with buffer map.

- Frozen or Snow Covered Ground
  - Between December 15<sup>th</sup> and March 1<sup>st</sup> BUA can only be done through injection (preferred) or same day incorporation. Same day incorporation is incorporation within 6 hours after biosolids are surface applied.
  - Between March 1<sup>st</sup> and December 15<sup>th</sup> surface application of Class B biosolids is prohibited on frozen or snow covered ground unless:
    - There is no less than 90% ground cover (grass, corn fodder, etc.) and there is no cover of ice or snow.
    - Surface application may not exceed an application rate of 5,000 gallons per acre

- Application may not occur on more than 20 contiguous acres. Application can be no closer than two hundred feet from surface waters of the state or water ways.
  - Attention must be given to outlets of BUA site surface drainage tile during and after application events. The OEPA must be notified within two hours if a runoff or seepage of Class B through drainage tile outlets is observed.
- BUA sites with subsurface tile drainage
    - All field tile outlets must be visually monitored before, during, and after BUA events. Monitoring will be documented and kept on file.
    - Methods or devices to stop or capture subsurface drain flow shall be immediately accessible.
    - If Class B biosolids reach the tile outlet to the surface waters of the state the beneficial use of biosolids shall cease and flow shall be stopped or captured and the OEPA must be notified no more than two hours after the observation is made.
    - Application rates may not exceed 13,000 gallons per acre regardless of application method (surface or incorporation).
    - If injection is used biosolids shall only be injected deep enough to cover the biosolids with soil but no less than 3 inches below the surface.
    - If injection is not an option or the farmer's desire all tile outlets at the BUA site are to be plugged at the time of the BUA event.
- Class B Biosolids BUA signs – According to OAC 3745-40-11
    - All BUA sites must have signs posted (signs provided by Renergy) no less than 7 days prior to a BUA application event.
    - Signs must be left at site no less than 30 days after BUA events are finished.
    - Must face each road frontage, within twenty-five feet of the road.
    - Are unobstructed from view.
- Documentation
    - Daily Logs of beneficial use application of Class B Biosolids must be documented and available at AD site for no less than 5 years.
    - Weather documentation during BUA events (see Precipitation Prohibitions and Restrictions)
    - Documentation of sign posting, buffer flagging, and tile outlet monitoring must be kept on file at AD site.

Updated: 9/5/19



PTI No. 1244335: Beginning on January 1, 2019, and on the 1st day of every subsequent month afterwards, the permittee shall submit to the Ohio EPA, Central District Office, Division of Surface Water, a representative depth of the accumulated fixed solids being stored at the bottom of the Steamtown anaerobic treatment lagoon (south lagoon).

- (a) Violation Description: The depth of solids in the south lagoon has not been provided to DSW-CDO.  
(b) Requested Action: Please submit the monthly levels to DSW-CDO from January 1, 2019, to present and continue to submit the levels going forward as required by the PTI.

**Renergy's Response:**

Please see the email below sent to John Owen and Betsy VanWormer on 9.5.19 discussing the plan for reporting solid accumulation levels going forward. We have also attached a copy of the pdf sent within this email showing the depth of solids accumulated from January 1, 2019 through July.

**Ashleigh Lemon** 

Yesterday at 1:43 PM

Details



Monthly Solids Accumulation

To: John.Owen@epa.ohio.gov, Cc: betsy.vanwormer@epa.ohio.gov, Carl Oberfield, Logan Rendles



Good Afternoon John,

Please see the attached pdf for the monthly solids accumulation through July for the south lagoon at Steamtown. We have already reviewed these numbers in a powerpoint presentation given to the OEPA at Central Office on August 8th but now you have them for your records.

In accordance to PTI No.1244335 we will report these to you monthly moving forward via email. So please be on the look out for our August numbers within the next week.

If you have any questions please let me know.

Thank you!

Ashleigh Lemon  
Communications and Sustainability Specialist, Renergy, Inc.  
Office: 419-253-5300 Ext. 3  
[renergy.com](http://renergy.com)

### Steamtown South Lagoon Solids Accumulation Report

| Month          | North West | West Central | South West | North East | East Central | South East | Average Depth of Solids |
|----------------|------------|--------------|------------|------------|--------------|------------|-------------------------|
| January 2019   | 1.5        | 2.0          | 2.5        | 1.5        | 2.0          | 2.5        | 2.00                    |
| February 2019  | 1.6        | 2.5          | 3.4        | 1.5        | 2.5          | 3.5        | 2.50                    |
| March 2019     | 2.4        | 3.5          | 5.6        | 2.4        | 3.6          | 5.0        | 3.75                    |
| April 2019     | 2.7        | 3.8          | 6.3        | 2.9        | 4.0          | 5.8        | 4.25                    |
| May 2019       | 3.2        | 4.4          | 6.7        | 3.4        | 4.6          | 6.2        | 4.75                    |
| June 2019      | 2.5        | 3.6          | 5.4        | 2.4        | 3.7          | 4.9        | 3.75                    |
| July 2019      | 1.6        | 2.6          | 3.5        | 1.4        | 2.4          | 3.5        | 2.50                    |
| August 2019    |            |              |            |            |              |            | 0.00                    |
| September 2019 |            |              |            |            |              |            | 0.00                    |
| October 2019   |            |              |            |            |              |            | 0.00                    |
| November 2019  |            |              |            |            |              |            | 0.00                    |
| December 2019  |            |              |            |            |              |            | 0.00                    |
| January 2020   |            |              |            |            |              |            | 0.00                    |
| February 2020  |            |              |            |            |              |            | 0.00                    |
| March 2020     |            |              |            |            |              |            | 0.00                    |
| April 2020     |            |              |            |            |              |            | 0.00                    |
| May 2020       |            |              |            |            |              |            | 0.00                    |
| June 2020      |            |              |            |            |              |            | 0.00                    |
| July 2020      |            |              |            |            |              |            | 0.00                    |
| August 2020    |            |              |            |            |              |            | 0.00                    |
| September 2020 |            |              |            |            |              |            | 0.00                    |
| October 2020   |            |              |            |            |              |            | 0.00                    |
| November 2020  |            |              |            |            |              |            | 0.00                    |
| December 2020  |            |              |            |            |              |            | 0.00                    |

### Steamtown South Lagoon Layout

3 measurements are taken per grid and averaged for Solids Accumulation Reporting.

A total of 18 measurements are taken each month.

|              |              |
|--------------|--------------|
| North West   | North East   |
| West Central | East Central |
| South West   | South East   |

Thank you,

*Ashleigh Lemon*

Ashleigh Lemon  
Communications and Sustainability Specialist  
Renergy, Inc.